

STENINA, T.A.

Microbiological characteristics of some soils of the Komi A.S.S.R.
Izv. Komi fil. Geog. ob-va SSSR no.9:38-48 '64.

(MIRA 18:5)

STENINA, T.A.

Decomposition of plant residues in arable Podzolic soils.
Pochvovedenie no.1:95-102 Ja '64. (MIRA 17:3)

1. Komi filial Akademii nauk SSSR.

L 18994-63

EWP(q)/EWT(m)/BDS

AFFTC/ASD/ESD-3

Pq-4

WH/JD/JG

ACCESSION NR: AT3002454

S/2935/62/000/000/0207/0211

AUTHOR: Gaman, V. I.; Sirotkin, A. A.; Stenina, V. M.

TITLE: Effect of As-S-I low-melt glass on current-voltage characteristics of silicon p-n junctions [Conference on Surface Properties of Semiconductors, Institute of Electrochemistry, AN SSSR, Moscow, 5-6 June, 1961]

SOURCE: Poverkhnostnyye svoystva poluprovodnikov. Moscow, Izd-vo AN SSSR, 1962, 207-211

TOPIC TAGS: low-melt glass, current-voltage characteristic, semiconductor, silicon, silicon junction

ABSTRACT: Experimental studies are described of alloyed Si junctions hot-coated with 24% As, 67% Si, 9% I glass. The dielectric constant of the glass was 6.5, its $\tan \delta$ was $(4.5-0.4) \times 10^{-3}$ at 30-10,000 cps. Al was alloyed into n-Si with a resistivity of 10-15 ohms.cm. The junctions were dipped into the glass melt at 250-300C for 1 min, then aged for 30-50 hrs at 130-150C, then subjected

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3
to tropical humidity for 75 hrs, and finally went through 3 thermal 70-min cycles -60+130C. Reverse current-voltage characteristics were determined at various stages of the above treatment. It was found that the glass acted as a getter absorbing contaminants from the surface of the junctions; that the glass was moisture-resistant and that its dielectric loss was low. "In conclusion, the authors wish to thank B. V. Makarkin for measuring the dielectric characteristics of the glass." Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Tomskiy gosudarstvennyy universitet im. V. V. Kuybyshcheva
(Tomsk State University)

SUBMITTED: 00

DATE ACQ: 15May63

ENCL: 00

SUB CODE: PH

NO REF SOV: 002

OTHER: 005

Card 2/2

FRIDMAN, E.A.; STENINA, Ye.S.

Analysis of an outbreak of influenza caused by a mixed culture of
virus types A₁ and C. Trudy Len.inst.epid.i mikrobiol. 17:30-35
'58. (MIRA 16:2)

1. Iz laboratorii Leningradskogo instituta epidemiologii, mikrobiolo-
gii i gigiyeny imeni Pastera, zav. E.A. Fridman.
(INFLUENZA—MICROBIOLOGY)

ANSHELES, I.M.; FRIDMAN, E.A.; STENINA, Ye.S.; KLUSHINA, T.A.; TARASOVA, Ye.F.; KHAZANSON, L.B.

Epidemiological and virological characteristics of the influenza pandemic of 1957 in Leningrad. Trudy Len.inst.epid.i mikrobiol. (MIRA 16:2)
17:66-77 '58.

1. Iz sektora epidemiologii (zav. I.M. Ansheles) i laboratorii grippa (zav. E.A. Fridman) Leningradskogo instituta epidemiologii, mikrobiologii i gigiyeny imeni Pastera, Gorodskoy sanitarno-epidemiologicheskoy stantsii i Protivogrippoznogo kabineta 39-y polikliniki Dzerzhinskogo rayona, Leningrada.
(LENINGRAD—INFLUENZA)

ANSHELES, I.M.; FRIDMAN, E.A.; KIUSHINA, T.A.; STENINA, Ye.S.; KHAZENSON, L.B.;
TARASOVA, Ye.F.

Influenza pandemic of 1957 and certain epidemiological and virological
characteristics of influenza in Leningrad. Vop. virus 4 no.1: Ja-F '59
(MIRA 12:4)

1. Leningradskiy institut epidemiologii, mikrobiologii i gigiyeny imeni
Pastera, Leningradskaya gorodskaya sanitarno-epidemiologicheskaya stant-
siya i 39-ya poliklinika.

(INFLUENZA, epidemiol.
in Russia (Rus))

FRIDMAN, E.A.; GRIGOR'YEVA-BERENSHTEYN, A.G.; STENINA, Ye.S.; KUDYAKOVA,
L.I.; FILIPPOVA, G.D.; BOLDASOV, V.K.

Immunological evaluation of the effectiveness of anti-influenza
vaccination in 1958-1959 '61. Trudy Len.inst.epid.i mikrobiol. :
22:146-156 '61 (MIRA 16:2)

1. Iz laboratorii grippa (zav. E.A. Fridman) Leningradskogo
instituta epidemiologii i mikrobiologii imeni Pastera i otdela
epidemiologii (zav. A.G. Grigor'yeva-Berenshteyn) Leningradskogo
nauchno-issledovatel'skogo instituta vaktsin i syvorotok.
(INFLUENZA—PREVENTIVE INOCULATION) (IMMUNITY)

81544

SOV/137-59-5-11408

18.7100

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 275
(USSR)

AUTHORS: Stenkin, P.A., Lipchin, N.N.

TITLE: Application of High Heating Temperatures in Isothermal Quench-Hardening of Carbon Tool Steel

PERIODICAL: Prom.-ekon. byul. Sovnarkhoz Permsk. ekon. adm. r-na, 1958, Nr 9, pp 7 - 11

ABSTRACT:

To increase stability of supercooled austenite within the range of perlite and intermediate transformations, heating for quench-hardening was carried out to higher temperatures. To avoid grain growth at high temperatures the rate of heating must exceed the rate of grain growth. Specimens of U8 steel of 10 mm cross section were heated in a salt bath at 1,000°, 1,100° and 1,200°C, were held for different lengths of time and were then quenched in oil heated to 130°C. The best results in quench-hardening were obtained after speeded-up heating in a salt bath, holding at 1,200°C for 3 sec, for 6 sec at 1,100°C and for 10 sec at

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SOV/129-59-5-16/17

AUTHORS: Lipchin N.N. (Cand.Tech.Sciences) and Sten'kin P.A.
(Engineer)

TITLE: Isothermal Quenching of Carbon Steels from High Heating
Temperatures (Izotermicheskaya zakalka uglerodistykh
staley s vysokikh temperatur nagreva)

PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov,
1959, Nr 5, pp 59-60 (USSR)

ABSTRACT: Isothermal quenching of complicated carbon steel tools
from currently used heating temperatures reduces deformation
considerably but it cannot be used in practice since it does not
ensure the required high hardness. Therefore, for manufacturing
tools of complex shape, alloy steels are used instead of carbon
steels. The tools are subjected to ordinary hardening and then they
are trued. For increasing the stability of super-cooled austenite
of carbon steels in the range of perlitic and intermediate
transformations the authors heated the specimens for hardening
to more elevated temperatures so that they could apply heated
media for cooling. The curve, Fig 1, shows the influence of the
heating temperature of 5 mm diameter U7 steel specimens on the
hardness in the case of

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SOV/129-59-5-16/17

Isothermal Quenching of Carbon Steels from High Heating Temperatures quenching in oil heated to 1300°C. However, the properties of steel are influenced not only by the temperature but also by the speed of heating and the duration of maintaining the specimen at the given temperature. To avoid grain growth at elevated temperatures it is necessary to apply a heating speed which is slightly higher than the speed of grain growth. This condition can be fulfilled for some tools in the case of heating in ordinary salt baths. The dependence of the change in hardness of the core of a 10 mm diameter U8-steel specimen on the duration of heating at 1000, 1100 and 1200 °C with subsequent quenching in oil heated to 1300°C is graphed in Fig 2. A hardness of 60 R_c can be obtained by heating with a speed of 400°C/sec to 1200°C, 200°C/sec to 1100°C and 100°C/sec to 1000°C and holding the components at these temperatures for 0.5, 1 and 1.5 min respectively. The authors established that the heating duration of components for each 1 mm of the cross-section in the case of heating in a salt bath should be 3 sec for 1200°C, 6 sec for 1100°C and 10 sec for 1000°C.

Card 2/4 Investigations have shown that if such a regime is applied, the hardened specimens and tools will conserve

SOV/129-59-5-16/17

Isothermal Quenching of Carbon Steels from High Heating Temperatures
a fine grain structure. An appreciable growth of the grain was observed only in the case of 3- to 4-fold increases of the heating durations compared to those graphed in Fig 2. The deformation during hardening was measured on French type ring specimens. Thus, in the case of quenching such specimens in water after heating for 0.5 min at 1200°C, the deformation between the reference points was 0.37 mm whilst in the case of quenching in oil heated to 130°C, the corresponding deformation was 0.4 mm, i.e. 9 times lower. The hardness was 60 to 62 R_C. In the Perm' Machinery Works introduction of the method of isothermal hardening in heated oil after accelerated heating to elevated temperatures has eliminated completely rejects due to cracks in the manufacture of blades of meat cutting machines. Originally the number of rejects reached up to 30%. The here-described method is likely

Card 3/4 to be extensively used for hardening of small carbon

SOV/129-59-5-16/17

Isothermal Quenching of Carbon Steels from High Heating Temperatures

steel components and tools of complex shape which are
prone to crack formation and warping.

There are 2 figures.

Note: This is a complete translation.

ASSOCIATION: Permskiy gosudarstvennyy universitet i Permskiy
zavod torgovogo mashinostroyeniya (Perm' State
University and Perm' Works for Consumer Goods Machinery)

Card 4/4

S/147/63/000/001/012/020
E031/E181

AUTHOR: Sten'kin, Ye.D.

TITLE: The optimum ratio of the total pressures in the mixing chamber of a by-pass jet engine

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, no.1, 1963, 104-115

TEXT: Initially it is assumed that $k_I = k_{II}$, where k is the adiabatic exponent and the subscripts indicate the inner (I) and the surrounding (II) gas flows at the input to the mixing chamber, respectively. The maximum positive effect of mixing is determined by the difference achieved thereby in the total temperatures of the initial flows. The maximum is achieved at an optimum ratio of the total pressures p . In this paper, this ratio is determined for a cylindrical mixing chamber. The effect of mixing is found from the ratio of the output momentum flow of the mixture to the sum of the momentum flows of the separate streams. From this, and assuming p_{II}^* and λ_{II} (the asterisk denotes isentropic ram compression and λ is the reduced velocity)

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The optimum ratio of the total ...

S/147/63/000/001/012/020
E031/E181

are constant, a system of equations for p_I^* is established.

It was recommended by A.L. Klyachkin (NDVSh, Energetika, no.2, 1959) that, for optimum mixing, the total pressures should be equal. This is confirmed to within the approximations of this paper. Graphs of the pressure ratio for various λ_{II} are given.

The conclusions of A.L. Klyachkin are generalized by taking account of the effect of different temperature ratios and, finally, for $k_I \neq k_{II}$.

There are 6 figures.

SUBMITTED: June 11, 1962

Card 2/2

ACCESSION NR: AP4040975

S/0147/64/000/002/0088/0101

AUTHOR: Sten'kin, Ye. D.

TITLE: Optimum compression in the compressor of a bypass turbojet engine with afterburning

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 2, 1964, 88-101

TOPIC TAGS: turbojet engine, bypass turbojet engine, thrust augmentation, turbojet

ABSTRACT: The performance characteristics of a bypass turbojet engine with afterburning to a great extent depend on the degree of pressure increase (π_{kI}) in the main gas generator. Formulas were derived in terms of engine cycle parameters for determining the optimum values of π_{kI} for a bypass turbojet engine with and without mixing of the flows. Use of the formulas reduces the cumbersome thermodynamic calculations currently used in selecting optimum engine parameters and is particularly recommended in cases where electronic computers are employed. Orig. art. has: 48 formulas and 5 figures.

ASSOCIATION: none

Card 1/2

ACCESSION NR: AP4040975

SUBMITTED: 06Jan64

ATD PRESS: 3049

ENCL: 00

SUB CODE: PR

NO REF SOV: 003

OTHER: 002

Card 2/2

STEN'KIN, Ye.D.

Optimum compression in the compressor of a by-pass turbojet engine
with a booster. Izv.vys.ucheb.zav.;av.tekh.7 no.2:88-10. '64,
(MIRA 17:9)

STEN'KIN, Ye.D.

Consumption and pressure characteristics of the mixing chamber
of a bypass turbojet engine. Izv. vys. ucheb. zav.; av. tekhn. 8
no.2:115-120 '65. (MIRA 18:5)

AUTHOR: Sten'kin, Ye. D. B

TITLE: Input-output head characteristic of the mixing chamber, gas dynamic analysis, jet engine theory, gas dynamics, input output characteristic

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 2, 1965, 115-120

TOPIC TAGS: dual turbojet engine, mixing chamber, gas dynamic analysis, jet engine theory, gas dynamics, input output characteristic

ABSTRACT: In double turbojet engines (abbreviated DTJE) which are designed for subsonic flight speeds, a mixing chamber is normally provided. Depending on the operating mode of the engine, this chamber, just as the other units, will have a varying effect on engine efficiency. The analysis of this effect at non-rated modes (non-rated operating conditions) is shown in the article to be closely related to the characteristic of the unit (in this case, the mixing chamber), with the characteristic making possible the representation, usually in graphic form, of the fundamental thermo- and gas-dynamic peculiarities of the unit itself. Such a mixing chamber characteristic is derived in this article. The analysis deals only with the complete mixture leaving the chamber, while the problem of partial mixture is

L 50505-65

ACCESSION NR: AP5012093

not discussed in the present paper. The determination of the complete mixture temperature is considered. In the author's treatment, the mixing chamber is regarded as a particular case of an ejector with the characteristic developed on the basis of methods for the calculation of mixture parameters. The method proposed in the article, while specifically elaborated for a cylindrical mixing chamber (the type normally found in DTJE), can also be used with chambers having a variable cross section. The choice of coordinates for the representation of the characteristic is determined in this method by their suitability for a thermodynamic analysis of the DTJE. An example of such a characteristic is given in graphic form. It is analyzed for its basic peculiarities under different engine operating conditions. Orig. art. has: 10 formulas and 3 figures.

ASSOCIATION: None

SUBMITTED: 15Apr63

ENCL: 00

SUB CODE: PR

NO REF SOV: 005

OTHER: 000

L 29330-66 EWP(m)/EWP(k)/EWT(d)/EWT(l)/EWT(m)/T/EWP(w)/EWP(v) IJP(c) EM/KA/WE
ACC NR: AP6017831 SOURCE CODE: UR/0147/66/000/002/0083/0089

AUTHOR: Sten'kin, Ye. D.

ORG: none

TITLE: Simultaneous flow of two gas streams through a reaction nozzle

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 2, 1966, 83-89

TOPIC TAGS: turbojet, bypass turbojet, afterburner, jet mixing

ABSTRACT: The mixing chambers in bypass turbojet engines are comparatively short (1 to 2 chamber diameters). Therefore, mixing is not complete since a chamber length of 4 to 5 chamber diameters is required for complete mixing. This problem was analyzed under the assumption that the flow takes place without loss in total pressure and that at below critical flow velocities the pressure at the exit section equals the external pressure. The analysis based on Lyapunov's theorem for the flow stability yielded a formula which correlates the flow parameters of both streams. This formula showed that in the exit section, one stream is always subsonic while the other is supersonic. The formula can be used for designing mixing chambers of bypass turbojet engines or for afterburner mixing chambers. Orig. art. has: 16 formulas and 3 figures. [PV]

SUB CODE: 21/ SUBM DATE: 18Jan65/ ORIG REF: 006/ OTH REF: 003/ ATD PRESS 50/0

Cord 1/1 CC

UDC: 629.194.33

LEBEDEV, P.T.; USOVICH, A.T.; CHEPUROV, K.P., prof.; KAL'CHENKO, M.M., aspirant; MATUSEVICH, V.F., doktor veterin. nauk; STEN'KO, A.S., mladshiy nauchnyy sotrudnik; LAKHMYTKINA, A.N., aspirant; GRISHCHENKO, N.F.; ORLOV, A.I., veterinarnyy vrach (Arkhangel'skaya obl.); PROSTYAKOV, A.P., kand. biolog. nauk; KOVYNDIKOV, M.S., kand. veterin. nauk; ARLFDZHANOV, K.A., kand. veterin. nauk

Veterinary experiments. Veterinariia 41 no.4:101-111 Ap '64.
(MIRA 17:8)

1. Sibirskiy nauchno-issledovatel'skiy veterinarnyy institut (for Lebedev, Usovich). 2. Poltavskiy sel'skokhozyaystvennyy institut (for Chepurov, Kal'chenko). 3. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya (for Matusevich, Sten'ko, Lakhmytkina). 4. Chernigovskaya oblastnaya veterinarnaya laboratoriya (for Grishchenko). 5. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy veterinarii (for Prostyakov, Fortushnyy, Kovyndikov). 6. Uzbekskiy nauchno-issledovatel'skiy veterinarnyy institut (for Arifdzhanov).

L 26115-66 ENT(m)/RWA(d)/ETP(t)/ENP(k) LJP(c) JI/PM

ACC NR: AT6014331

SOURCE CODE: UR/2529/62/000/070/0106/0123

AUTHOR: Stenko, B. P.

ORG: none

TITLE: Thermal phenomena during the process of shear formingSOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 70, 1962. Aviatsionnaya tekhnologiya i organizatsiya proizvodstva (Aviation engineering and organization of production), 106-123

TOPIC TAGS: metal forming, shear forming, hydroforming

ABSTRACT: Thin-wall shells in the shape of a body of revolution are frequently used in aircraft and aerospace vehicles. Manufacture of such shells by conventional methods is both difficult and expensive, especially when heat- and oxidation-resistant steels and alloys with poor machinability are involved. A new method of "shear forming" appears to be much simpler and more economical. In shear forming, specific pressures of 300 kg/mm² and higher are used and initial preforms can be up to 40 mm thick. Wide use of this method is delayed by a lack of theoretical and experimental studies which would provide a basis for establishing the optimal conditions of the process, designing equipment and tools, and expanding the number of materials and parts which can be processed. The department of aircraft construction at Kazan' Aviation Institute, under the leadership of Professor M. I. Lysov, is presently studying the

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L 261145-66

ACC NR: AT6014331

process of shear forming to obtain the data needed for designing technological processes. These studies include investigation of the stress and strain states of formed parts, depending on the material used and the forming conditions; investigations of force factors and thermal processes; and testing cooling and lubrication methods. This article is a report on a theoretical analysis of thermal phenomena taking place in the formed part and formed tool. A series of equations is derived and used to calculate the temperature fields in a formed part of cylindrical shape and in a forming roller. Orig. art. has: 9 figures and 39 formulas. [DV]

SUB CODE: 13/ SUBM DATE: 04Nov61/ ORIG REF: 002/ ATD PRESS: 4251

Card

2/2

I. 00601-66 ENT(1)/EWT(m)/EWP(t)/EWP(k)/EWP(b)/EWA(c) JD/PN

ACCESSION NR: AR5018953

UR/0276/65/000/007/V027/V027
621.983.4

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 7V202

AUTHOR: Stenko, B. P. 44,55

TITLE: Measuring the forces arising during power spinning and ironing

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vyp. 84, 1964, 85-94
44,55

TOPIC TAGS: power spinning, ironing, roller contact surface, surface projection

TRANSLATION: The report considers a program for defining the contact surface projected area for spinning rollers with a conical radial section. It is noted that the shape and dimensions of the contact surface and its projection depend on such parameters as the roller indentation depth t , feed S , the roller angle-of-taper φ , and their correlations. Formulas are given for calculating projections at S larger, smaller, or equal to $t \cdot \cot \varphi$. The author describes experimental procedure and equipment (machine tool, mandrel, spring dynamometer with resistance strips and instrumentation). Bibl. with 3 titles, 5 illustrations. S. Kolesnikov

Card 1/2

L 00601-66

ACCESSION NR: AR5018953

SUB CODE: IE

ENCL: 00

0

Card 2/2

L 16105-66 EWP(k)/EWT(1)/EWT(m)/EWA(d)/EWP(t) JD/HEV

ACC NR: AT6003155

SOURCE CODE: UR/2529/64/000/084/0085/0094

AUTHOR: Stenko, B. P.

ORG: Kazan Aviation Institute (Kazanskiy aviatsionnyy institut)

TITLE: On the question of determining stresses in the process of forced precision
pressing of parts

SOURCE: ^{1,44,55}Kazan. Aviatsionnyy institut. Trudy, no. 84, 1964. Aviatsionnaya
tekhnologiya i organizatsiya proizvodstva (Aviation technology and production
management), 85-94

TOPIC TAGS: metal pressing, metalworking, metalworking machine, metal stamping,
metal forming, steel/ USA steel

ABSTRACT: Considerations in determining stresses occurring in the process of
forced rotational pressing of precision parts are developed. Emphasis is placed on
determining the effect on the process of such parameters as V - the rate of rotation,
S - the feed rate, f - the press coefficient, and others. The resultant stress P is
the product

$$P = q \cdot F,$$

where q is the mean unit tool pressure, and F is the contact area between the tool

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L 16105-66
ACC NR: AT6003155

and the part. This product may be written in a form suited to defining stress components as related to area projections on coordinate planes. A method of determining the projected areas of contact surface for press rollers with conical radial profiles is developed. Circumferential deformations are ignored as radial and longitudinal distortions are emphasized. Geometrical equalities for an example case are given. Special testing equipment was designed and constructed for studying the process. The equipment consisted of a dynamometer with a press roller, a press mandrel, and instrumentation. Each major component of the test equipment is described. The system was tested and checked out with the preparation of a roller of USA steel. Some details of temperature-measuring instrumentation are given. Orig. art. has: 27 equations and 5 figures.

SUB CODE: 13/ SUBM DATE: 010ct63/ ORIG REF: 003

Card 2/2 *SL*

KHAYET, G.L., kand.tekhn.nauk; STEN'KO, D.A., inzh.; BRUSILOVSKIY, B.A., inzh.

Experience of the Novo-Kramatorsk Machinery Plant (Kramatorsk)
in hard-facing large parts by rolling with rolls. [Trudy]
TSNIITMASH 91:76-94 '59. (MIRA 12:8)
(Hard facing) (Kramatorsk--Machinery industry)

STEN'KO, D.A.

SOV/2885

PHASE I BOOK EXPLOITATION

25(2,5)

Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

Povysheniye prochnosti elementov konstruktivnykh i detalей mashin (Increasing the Strength of Constructional and Machine Elements) Moscow, Mashgiz, 1959. 210 p. (Series: Ika. Sbornik / kn. 91) 5,500 copies printed.

Ed. (Title page): I. V. Kudryavtsev, Doctor of Technical Sciences, Professor, Ed. (Inside book): A. G. Nikitin, Engineer, Tech. Ed.: V. D. El'kind, Managing Ed. for Literature on Transport Machine Building (Mashgiz): K. A. Ponomarev, Engineer.

PURPOSE: This collection of articles is intended for designers, process engineers, and scientific research workers in the machine-building industry.

COVERAGE: The collection contains papers dealing with experimental work done recently by TsMFTKh. The experiments are concerned with the practical use of surface work hardening in industry. Industrial practices intended to increase the strength and service life of machine parts and constructional elements are discussed. Several articles are devoted to problems of increasing the strength of machine parts by work hardening. Industrial practices of MKhZ in Kramatorsk in external burnishing of large machine parts are presented. Tools and fixtures used in surface work hardening are described. No personalities are mentioned. References follow each article.

Author: D. A. Sten'ko, Candidate of Technical Sciences, D. A. Sten'ko, and B. A. Brullovskiy, Engineer, Practice at the Novo-Kramatorskiy mashinostroitel'nyy zavod (Kramatorsk New Machine-Building Plant) in External Burnishing of Large Machine Parts With Rollers 76

The technique of conducting experiments, the geometry of the tool, the principles of selecting the burnishing regime, and the devices used are described and discussed. A table with diagrams of burnished machine parts and data on effects of burnishing is presented.

Kudryavtsev, I. V., and B. A. Balabanov, Candidate of Technical Science, Work Hardening of Stamped Shafts by Fillet Peening 131

Results of fatigue tests on stepped steel shafts are analyzed. Comparisons are drawn between shafts work-hardened by fillet peening and shafts not subjected to any work-hardening process. Fillet peening was accomplished on a milling machine with a special attachment having a spring-actuated striking pin with a spherically rounded end.

Burata, A. I., Engineer, Increasing the Life of Metallurgical Machinery Parts by External Burnishing With Rollers 123

Constructions of the burnishing devices used are described, and some problems connected with the technique of burnishing are discussed. Results of testing burnished surfaces in operation are presented.

KOYRE, V.Ye., kand.tekhn.nauk; STEN'KO, D.A.

Using roll burnishing for improving the macrogeometry of
large part surfaces. Vest.mashinostr. 45 no.11:46-47 II
'65. (MIRA 18:12)

507/5921

PLANE 1 BOOK EXPLANATION

Abdumalya nauk SSSR. Institut fizicheskoy khimii

Problemy khimii i teorii. [t.] 10: Fizika i fiziko-khimiya kataliza (Problems of Kinetics and Catalysis. [vol.] 10: Physics and Physico-Chemistry of Catalysis) Moscow, Izd-vo AN SSSR, 1960. 461 p. Errata ally inserted. 2,000 copies printed.

Eds.: B.Z. Roginskii, Corresponding Member of the Academy of Sciences USSR, and O.Y. Erylov, Candidate of Chemistry; Ed. of Publishing House: A.Y. Kucharskiy; Tech. Ed.: G.A. Arstaf'yeva.

PURPOSE: This collection of articles is addressed to physicists and chemists and to the community of scientists in general interested in recent research on the physics and physical chemistry of catalysis.

CONTENTS: The articles in this collection were read at the conference on the Physics and Physical Chemistry of Catalysis organized by the Odesk Khimicheskii nauk AN SSSR (Section of Chemical Sciences, Academy of Sciences USSR) and by the Academic Council on the problem of "the scientific bases for the selection of catalysts." The conference was held at the Institute Fizicheskoy khimii AN SSSR (Institute of Physical Chemistry of the AN USSR) in Moscow, March 18-23, 1960. Of the great volume of material presented at the conference, only papers not published elsewhere were included in this collection.

Erylov, O.Y., Erylov, O.Y., and B.Z. Roginskii, [Institute of Physical Chemistry of the AN USSR]. Catalytic Properties of Germanium 102

Kucharskiy, I.Y., and G.I. Borovkov [Fiziko-khicheskii Institut Iseini L.Ye. Karpova (Physicochemical Institute Iseini L.Ye. Karpov)]. Investigation of the Relation Between the Catalytic Activity and the Semiconductor Properties of Germanium 108

Kraschenko, V.Y., G.P. Mosonov, and I.I. Stambis [Institute of Physics of the AN USSR]. Change in the Surface Contact Potential of Germanium During Adsorption and Catalysis 111

Erylov, O.Y., B.Z. Roginskii, and Ye. A.P. Solov'ev [Institute of Physical Chemistry of the AN USSR]. Catalysis Over Semiconductors in the Self-Condensation Zone 117

Kolochits, I.Y. [Eastern Siberian Branch of the AN USSR]. Selection of High Temperature Sulfide Catalysts for Various Cases of Destructive Hydrogenation 121

II. CATALYSIS OVER METALS

Borovkov, G.I. [Physicochemical Institute Iseini L.Ye. Karpov]. Catalysis Over Metals 128

Bonch-Bruyevich, V.L., and V.B. Glazko [Department of Physics of Moscow State University]. Contribution to the Theory of Chemical Adsorption of Metals 141

Praslatovskii, V.I. [Institute of Physical Chemistry of the Polish Academy of Sciences, Wroclaw]. Structure and Magnetic Properties of Some Metallic Contacts 155

Freit'yakov, I.I. [Institute of Physical Chemistry of the AN USSR]. Investigation of the Adsorption of Gases on Metals with the Aid of an Electron Projector 164

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Franklin, L.H. [Institute of Organic Chemistry of the AN USSR]. Investigation of the Selective Action of Catalysts in Hydrogenation and Reduction Reactions 187

Gorbunov, A.Y., and G.I. Borovkov [Moscow Chemical Technological Institute Iseini D.Ye. Mendeleev]. Catalysis of Isotopic Exchange in Molecular Hydrogen by Transition Metals of the 4th Period 192

Jachnikov, B.B., L.D. Kunatov, V.A. Kucharskiy, V.Ye. Shishkov, L.M. Pechirayko, and B.Z. Roginskii [State Institute of the Nitrogen Industry]. Activity and Structure of Iron Catalysts with Three and Four Promoters for the Synthesis of Ammonia 199

Lebedev, V.P. [Moscow State University]. Relation Between the Parameters of the Arrhenius Equation for Contact Platinum Catalysts 204

Roginskii, B.Z., Yu.Ye. Shishkov, and M.I. Tsvetkov [Institute of Physical Chemistry AN USSR]. Investigation by the Isotope Method of the Surface of the Alkali Promoter of an Ammonia Catalyst 210

TERENT'YEVA, M.V. [TSierents'eva, M.V.]; LOBACH, T.Ya.; STEN'KO, I.Ya.
[Stsian'ko, L.IA.]

Content of basic microelements in some varieties of fruit and
berry crops of White Russia. Vestsi. AN BSSR. Ser. biial. nav.
no.4:46-51 '64. (MIRA 18:12)

STENKO, M. I. Cand. Med. Sci.

Dissertation: "Clinical and Laboratory Data for Evaluating the Effectiveness of Treating Infected Wounds with Gramicidin and Other Therapeutic Preparations." Central Inst. for Advanced Training of Physicians. 8 Jul 47.

SO: Vechernyaya Moskva, Jul, 1947 (Project #17836)

KOST, Ye.A., prof.; STENKO, M.I.

"Blood picture and its clinical significance" by D. N. IAnovskii.
Reviewed by E. A. Kost, M.I. Stenko. Probl. gemat. i perel. krovi
4 no.6:59-61 Je '59. (MIRA 12:8)
(BLOOD) (IANOVSKII, D.N.)

STEN'KO, Mikhail Ivanovich; MAMYSH, A.I.; LISAKOVSKIY, I.N.

[The oldest in the South; outline history of the Taganrog
Ship Repair Plant] Stareishii na IUge; ocherk istorii Tagan-
rogskego sudoremontnogo zavoda. Rostov-na-Donu, Rostovskoe
knizhnoe izd-vo, 1961. 126 p. (MIRA 16:2)
(Taganrog--Ships--Maintenance and repair)

BORISOV, V.I.; STEN'KO, M.N.; SHIROKIKH, D.P.

Shortcomings of a zoology trial textbook ("Zoology"; textbook for secondary schools by V.F. Natali. Reviewed by V.I. Borisov, M.N. Sten'ko, D.P. Shirokikh). Biol. v shkole no.5:93 S-O '58. (MIRA 11:11)

1. Krasnodarskiy pedagogicheskiy institut.
(Zoology--Study and teaching) (Natali, V.F.)

^{M.}
STEN'KO, Yu., mladshiy nauchnyy sotrudnik

Data concerning temperature drops connected with air conditioning on
ships. Mor.flot 19 no.1:22-23 Ja '59. (MIRA 12:3)

1. Moskovskiy nauchno-issledovatel'skiy institut gigiyeny i sanitarii
im. F.F.Erismana.

(Ships--Air conditioning)

STEN'KO, Yu.M., mladshiy nauchnyy sotrudnik

Basis of hygienic factors of temperature and humidity of the air
in cabins of ships sailing in tropical waters. Gig. i san. 25
no. 5:38-43 My '60. (MIRA 13:10)

1. Is TSentral'noy nauchno-issledovatel'skoy laboratorii gigiyeny
vodnogo transporta.

(SHIPS—AIR CONDITIONING)

POPOV, Garri Sergeyevich; RASTORGUYEV, Petr Vasil'kevich; STEN'KO,
Yuriy Mikhaylovich; NOVIKOV, Teodor Nikitovich; BARKOV,
G.D., red.; BONDAREV, G.I., kand. med. nauk, red.;
MOSCHAROVA, T.P., red.izd-va; TIKHONOVA, Ye.A., tekhn. red.

[Medical handbook for the ship's captain] Meditsinskii spra-
vochnik kapitana. Pod obshchei red. G.D.Barkova. Moskva,
Izd-vo "Morskoi transport," 1963. 213 p. (MIRA 16:5)

1. Direktor TSentral'noy nauchno-issledovatel'skoy laboratorii
gigiyeny vodnogo transporta (for Barkov).
(MEDICINE, NAVAL—HANDBOOKS, MANUALS, ETC.)

KRASNOV, M.L., prof.; SIVOSHINSKIY, D.S., dotsent; ZIANGIROVA, G.G.;
VYALOVA, Ye.V.; STEN'KO, Z.L.

Results of three year's use of radioactive isotopes in the
diagnosis of intraocular tumors. Trudy TSIU 71:107-112 '64.
(MIRA 18:6)

1. Kafedra glaznykh bolezney (zav. prof. M.L. Krasnov), kafedra
meditsinskoy radiologii (zav. prof. V.K. Modestov) TSentral'nogo
instituta usovershenstvovaniya vrachey i Moskovskaya glaznaya
klinicheskaya bol'nitsa.

STENKOVSKAYA, M. L.

USSR/Cultivated Plants - Potatoes. Vegetables. Melons.

M-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91662

Author : Stenkovskaya, M. L.

Inst : Omsk Agricultural Institute.

Title : Irrigation of Potato in Suburban Zone.

Orig Pub : S. kh. Sibiri. 1957, No 12, 40-43.

Abstract : In its 1954-1956 experiments the Agricultural Department of Omsk Agricultural Institute used Early Rose and Berlichingen potato varieties. The dates of watering and the irrigation rates varied depending on the quantity and distribution of atmospheric precipitation during the vegetative period. For the Early Rose variety in the Fall, before planting, a thorough drenching was given at approximately 1000 m³ per hectare, which provided 300 m³ per hectare more water reserve before full sprouting than on

Card 1/2

- 47 -

STENKOVSKAYA, M. L., Cand Agric Sci (diss) -- "The significance of certain agronomic procedures in the irrigation of early and late potatoes in the suburban zone of the city of Omsk". Omsk, 1960. 21 pp (Abstracts of Dissertations Submitted at Omsk Agric Inst im S. M. Kirov), 120 copies (KL, No 12, 1960, 129)

STANTON, M. V.

"A Method of Ultrasonic Absorption Measurement in Solids."

paper presented at 4th All-Union Conf. on Acoustics, Moscow, 26 May - 2 Jun 58.

VRSEK, J., inz.; BENES, F., inz., CSc.; SZABO, A., inz.; STENO, J., inz.

Problems of continuous casting of low-carbon steels. Hut
listy 18 no.11:773-779 N'63.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for Vrsek and Bones)
2. Svermove zeleziarne, Podbrezova (for Szabo and Steno).

STENO, M.

Osteopoikilosis. Bratisl. lek. listy 45 no.2:108-112
31 Ja '65

1. Ortopedická klinika lek. fak. Univerzity Komenskeho v Bratislave (veduci - akademik J.Cervenansky).

MURAS, J., TOME, M.

Trauma to the spine in orthopedic work. Acta chir. orthop.
traum. Cech. 31 no.4:313-318 Aug '64.

1. Ortopedická klinika Lekárskej fakulty University Komenského
v Bratislave (prednosta prof. dr. J. Cervenansky).

STENOVIC, M.

"The market for raw materials."

p. 1998 (Tekstil) Vol. 6, no. 12, Dec. 1957
Zagreb, Yugoslavia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

STEPAN, J,dr.

Medical profession and public authority. Cesk. zdrav. 12 no.5:
240-246 My'64

1. Vyzkumny ustav organizace zdravotnictvi v Praze.

STENPURINA, Z. K.

Cand Agr Sci - (diss) "Effect of sulfur of feed on the wool productivity of fine-fleeced sheep." Krasnodar, 1960. 23 pp; (Ministry of Agriculture RSFSR, Kuban' Agr Inst); 150 copies; price not given; (KL, 7-61 sup, 253)

IATAN, Nicolai, ing.; LANDES, V., ing.; ILINA, I., ing.; CIOCIRLIE, S., ing.;
MITROFAN, A.; POPA, M., ing.; MIHAILA, Gh.; POPA, Septimiu, ing.;
PASARE, P.; STENSCHI, C., ing.

Considerations on the quality of the equipment used for casting steel
ingots in Rumania. Metalurgia constr mas 14 no.11:976-983 N '62.

1. Institutul de cercetari metalurgice (for Iatan, Landes, Ilin).
2. Uzina "Victoria" Calan (for Ciocirlie, Mitrofan).
3. Intreprinderea metalurgia Aiud (for Popa, M., Mihaila).
4. Combinatul siderurgic Hunedoara (for Popa, Septimiu; Pasare).
5. Combinatul siderurgic Resita (for Stenschi).

KELENTY, B.; STENSZKY, E.; CZOLLNER, F.; MESSZAROS, Z. SZIAVIK, L.

Pharmacological study of acetylated morphine derivatives. Kiserletes
orvostud. 10 no.1:25-35 Feb 58.

1. Debreceni Orvostudományi Egyetem Gyógyszertani Intézete és Tis-
zavasvári Alkaloida Gyar..

(MORPHINE, related cpds.

acetyl deriv., pharmacol. & tox. (Hun))

STANSZKY, E.
KELENTY, B.; STANSZKY, E.; CZOLLNER, F.; SZIAVIK, L.; MESSZAROS, Z.

Preparation and pharmacological properties of N-oxides of opium alkaloids.
Kiserletes orvostud. 10 no.1:70-77 Feb 58.

1. Debreceni Orvostudományi Egyetem Gyógyszertani Intézete in es Tiszavasvári Alkaloida Gyar.

(OPIUM

N-oxides of opium alkaloids, prep., chem. properties,
pharmacol. & tox. (Hun))

STENSZKY, Ernő, Dr.; ASZÓDI, Lili, Dr.; CSOBAN, György, Dr.

Can antibiotics be bound to serum protein fractions? I. Orv. hetil. 100
no.2:70-71 11 Jan 59.

1. A Hajdu-Biharmegyei Tanács Kórháza (igazgató-főorvos: Manyi Géza dr.)
Megyei Verkonzerváló Állomásának, Debrecen (osztályvezető-főorvos: Aszodi
Lili dr.) és a Hajdusági Gyógyszergyár Biológiai Kutató Laboratóriumának
(osztályvezető: Csoban György dr.) közleménye.

(SERUM ALBUMEN

binding of penicillin, exper. in vivo & in vitro (Hun))

(PENICILLIN

binding by serum albumin, exper. in vivo & in vitro (Hun))

ASZODI, Lili, Dr.; ~~STENSZKY, Ernő, Dr.~~; BOT, György, Dr.

Serum phosphohexose-isomerase studies in blood donors. Orv. hetil. 100
no.6:213-214 8 Feb 59.

1. A Hajdu-Biharmegyei Tanács Kórháza (igazgató főorvos: Menyi Géza dr.)
Megyei Verkonzerváló Állomásának (osztályvezető főorvos: Aszodi Lili dr.)
és a Debreceni Orvostudományi Egyetem Kóreltani Intézetének (igazgató:
Kesztyűs: Loránd dr. egyet. tanár) közleménye.

(BLOOD TRANSFUSION

donors, blood phosphohexoisomerase determ. in screening for
prev. of post-transfusion hepatitis (Hun))

(HEPATITIS, etiol. & pathogen.

blood transfusion, prev. value of screening of donors by
determ. of blood phosphohexoisomerase activity (Hun))

(ISOMERASES, in blood

phosphohexoisomerase determ. in screening of blood donors
for prev. of post-transfusion hepatitis (Hun))

VAJDA, Istvan, dr.; ASZODI, Lili, dr.; HAJDU, Bela, dr.; STENSZKY, Ernő,
dr.; BARZO, Pal, dr.; HORVATH, Endre, dr.

Familial relations of acquired hemolytic anemia. *Magy. belorv. arch.*
13 no. 4: 121-124 Ag '60.

1. A Hajdu-Bihar Megyei Tanács Kórháza (Igazgató: Dr. Manyi Géza)
I. sz. Belosztályának (Főorvos: Dr. Vajda István), Megyei
Verkonzerváló Allomásának (Főorvos: Dr. Aszodi Lili) és az
Országos Vertranszfúziós Szolgálat Kózponti Kutató Intézetének
(Igazgató: Dr. Hollan Zsuzsanna) közleménye.
(ANEMIA, HEMOLYTIC genetics)

HORVATH, Endre; ASZODI, Lili; STENSZKY, Ernő; PAVAY, Agnes

Determination of incomplete anti-A and anti-B antibodies in group O pregnant subjects and in high-titer group O blood donors. Kísérletes orvostud. 13 no.3:245-250 Jé '61.

1. Országos Verellato Szolgálat Központi Kutató Intézete és Hajdu-Bihar megyei Tanács Kórház Verellato Osztálya.

(BLOOD GROUPS) (PREGNANCE blood)

LAZAR, Jozsef, dr.; STENSZKY, Erno, dr.; HAJDU, Bela, dr.

Quantitative determination of gastric acidity without a tube. Orv.
hetil. 102 no.18:830-832 30 Ap '61.

1. Megyei Tanacs, Korhaza, Debrecen.

(GASTRIC JUICE)

STENY, YA., KOLCHIN, A. M., PANCHENKOV, G. M. and MALAKHOV, V. F.

"Die massenspektrometrische Isotopenanalyse an Bor auf der Grundlage der Thermionem-Emission."

Report presented at the 2nd Conf. On Stable Isotopes
East German Academy of Sciences, Inst. of Applied Physical Material
Leipzig, GDR 30 Oct - 4 Nov 1961

KARTASHOV, T.M., elektrik; STENYANSKIY, V.N., elektrik

New automatic control system for electrodes for carbide kilns. .
Suggested by T.M.Kartashov, V.N.Stenianskii. Rats. i izobr. predl.
v stroi. no.15:64-66 '60. (MIRA 13:9)

1. Zaporozhskiy zavod metallokonstruktsiy Ukrglavstal'konstruktsii
Ministerstva stroitel'stva USSR, g. Zaporozh'ye, poselok 13.
(Electrodes)

STENYK, V.V.

S

USSR / Human and Animal Morphology (Normal and Pathological).
Cardiovascular System.

Abs Jour : Ref Zhur - Biol., No 21, 1958, No 97084

Author : Stenyk, V.V.
Inst : Lvov Oblast Scientific Society of Anatomists,
Histologists and Embryologists

Title : Arterial Blood Supply of the Cerebellum of the Dog by
Direct and Collateral Blood Circulation.

Orig Pub : Sb. nauchn. rabot. L'vovsk. obl. nauchn. o-vo anatomov,
gistol. i embriol., 1958, vyp. 1, 21-25

Abstract : It was shown on 6 dogs of both sexes that the cerebellum
is supplied by three pairs of cerebellar arteries (CA):
oral (superior), dorso-lateral (anterior-inferior) and
ventro-lateral (posterior-inferior), departing from the
basilar and vertebral arteries. All 3 pairs of CA
anastomose richly between themselves, forming, on the
surface of the cerebellum, a dense fine network. Changes of
CA after simultaneous bilateral exclusion of vertebral

Card 1/2

30

STENYK, V.V.

Angioarchitectonic of the cerebellum following experimental
ligation of the common carotid arteries in rabbits [with summary
in English]. Biul. eksp. biol. i med. 45 no.3:114-117 M'r'58 (MIRA 11:5)

1. Iz kafedry anatomii L'vovskogo meditsinskogo instituta.
Predstavlena deystvitelnym chlenom AMN SSSR S.A. Sarkisovym.

(ARTERIES, CAROTID, physiology

eff. of ligation of common on cerebellar vasc. system
(Rus))

(CEREBELLUM, blood supply.

eff. of ligation of common carotid arteries in rabbits
(Rus))

STENYK, V.V. (L'vov, ul. Serafimovicha, 11, kv.2)

The Department of Normal Anatomy at the Lvov Medical Institute.
Arkh.anat.gist.i embr. 37 no.12:100-103 D '59. (MIRA 13:5)
(ANATOMY educ.)

STENYK, V.V. (L'vov, ul. Serafimovicha, 11, kv. 2)

Arterial blood supply of the dentate nucleus of the rabbit
cerebellum in direct and collateral circulation. Arkh.anat.
gist.i embr. 39 no.7:80-83 J1 '60. (MIRA 14:5)

1. Kafedra anatomii (zav. - prof. A.P.Lyubomudrov) L'vovskogo
meditsinskogo instituta.
(CEREBELLUM--BLOOD SUPPLY)

STENYK, V.V. (L'vov, ul. Serafimovicha, 11, kv.2)

Angioarchitectonics of the optic thalamus of the rabbit in
direct and collateral blood circulation. Arkh. anat. gist.
i embr. 45 no.11:93-97 N '63. (MIRA 17:8)

2. Kafedra anatomii (zav. - prof. A.F. Lyubomudrov) L'vovskogo
meditsinskogo instituta.

STENYUKOVA, A.Ya. (Leningrad)

Preoperative oxygen therapy for patients with acquired heart defectr.
Grud. khir. 6 no.4:117-118 J1-Ag '64.

(MIRA 18:4)

STEPACHENOK-RUDNIK, G.I.; SHIPITSYNA, G.K.; RODIONOVA, I.V.

Comparative examination of the chemical structure of Mycobacteria tuberculosis with various virulence. Zhur. mikrobiol., epid. i immun. 40 no.1:44-48'63. (MIRA 16:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

KONOPA, Jerzy; LEDOCHOWSKI, Zygmunt; NAZAREWICZ, Teresa; FALKOWSKI, Leonard;
STENZEL, Jan; PIKIEL, Leonard

Studies on antineoplastic properties of *Poria obliqua*. I. General
data and in vitro studies. Nowotwory 11 no.3/4:393-400 '61.

1. Z Katedry Technologii Srodkow Leczniczych Politechniki Gdanskiej
Kierownik: prof. dr Z. Ledochowski Z Zakladu Anatomii Patologicznej
Akademii Medycznej w Gdansku Kierownik: prof. dr med. W. Czarnocki
Z Pracowni Nr 8 Zakladu Syntozy Organicznej PAN w Gdansku Kierownik:
prof. dr Z. Ledochowski.

(ANTINEOPLASTIC AGENTS pharmacol) (FUNGI)

HAZAREWICZ, Teresa; LEDOCHOWSKI, Zygmunt; KONOPA, Jerzy; STENZEL, Jan;
PIKIEL, Leonard; FALKOWSKI, Leonard; WISNIEWSKI, Henryk

Studies on antineoplastic properties of *Poria obliqua*. II. Studies
on the effect of *Poria obliqua* on the growth of transplanted tumors
in animals. Nowotwory 11 no.3/4:401-411 '61.

1. Z Zakladu Anatomii Patologicznej Akademii Medycznej w Gdansk
Kierownik: prof. dr med. W. Czarnocki z Katedry Technologii Srodkow
Lecznicznych Politechniki Gdanskiej Kierownik: prof. dr Z.Ledochowski
i z Pracowni Nr 8 Zakladu Syntezy Organicznej Polskiej Akademii Nauk
Kierownik: prof. dr Z. Ledochowski.
(ANTINEOPLASTIC AGENTS pharmacol) (FUNGI)

621.316.5.066.6

4113. Contact bounce. J. STENZL. *Elekrotech.*
Obzor, 42, No. 10, 347-50 (1953) in Russian.

The problem of contact bounce is treated as the direct central impact of two imperfectly elastic bodies. The solution of the differential equation of the problem as posed is straightforward. Imperfect elasticity of the real materials can be allowed for by means of a correction constant.

A. F. KRAUS

STENZL, J.

Czechoslovakia

Formaenderungen elektrischer Kontakte durch Abnutzung

SO: DT Elektrotechnik, Feb 1956, Uncl.

STENZL, J.

STENZL. J. Nikola Tesla. p. 70.

Vol. 12, no. 2, Feb. 1957

ELEKTROTECHNIK

TECHNOLOGY

Czechoslovakia

Sò: East European Accession, Vol. 6, No. 5, May 1957

MITITELU, C., ing.; HARABAGIU, M., chim.; STENZLER, R., ing.

Quality, control, statistics, suggestions for possible
application in paper manufacture. Cel hirtie 11 no.8:
285-295 Ag*62.

12/

Boiler accidents caused by incomplete study of the boiler feed water. A. STANESCU
Bul. chim. soc. române chim. 32, 19-27(1929).—Examples are given of results obtained
in boilers with 2 Roumanian waters having high alk. and high org. matter contents,
to show that the mere detn. of total hardness is insufficient to judge of the suitability
and performance of boiler feed water. A. PAPINCAU-COCHET

AS 15.1.1 METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

A-1

B^c

Determination of soluble silica in volcanic tuffs: A. Stenzen (Bull. Chim. pure appl. Baharst, 1908, 28, 27-44; Chem. Abstr., 1908, i, 710; cf. this vol. 688). -- Extraction with 10% Na₂CO₃+1% NaOH or 1% NaOH gives val. which vary according to the amount of the material and the duration of treatment. Al₂O₃ and Fe₂O₃ are also dissolved by this L. S. T.

E-37 METALLURGY

A58-354 METALLURGICAL LITERATURE CLASSIFICATION

FROM SIMILAR

INTRODUCED BY GUY COT

COLLATION

COLLECTED BY GUY COT

LONDON

MAY 1954

AMERICAN SOCIETY OF METALS

ca

8

The "rain of ashes" which fell at Bucharest on February 14 and 15, 1929. A. Sîrbuș, *Bul. chim. soc. române chim.* 32, 51-4(1929).—The dry material had the following compn.: loss on ignition 7.63, SiO_2 72.94, Al_2O_3 12.04, Fe_2O_3 1.43, CaO 1.72, MgO 0.90, undetd. 3.25%; it also contained 0.06% humic acids. Comparison of the compn. of the NaOH ext. with that of the volcanic tuff of Slanic, Prahova, showed that the 2 materials did not have the same origin. Conclusion: The dust which fell at Bucharest probably originated from bare fields in the agricultural districts of E. Roumania.

A. PAPINEAU-COUTURE

ASB-32A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p><i>BC</i></p> <p><i>8 I 9</i></p> <p>Influence of time of agitation and of addition of trace on the strength, setting time, and contraction of field cement mixes. A. S. S. (Sov. Union. Soc. Roadway Bldg., 1939, 22, 85-88, 73-75, 69-94, 95-96). Comparative tests on 1:1 cement mixes with 20% H₂O with or without 20% addition of trace mixed for 5-170 min. show that the effect of time variation differs with different makes of cement and each case must be separately studied. The mixtures with trace vary less than pure mixtures, but inversely. Addition of 20% of trace (on the wt. of cement) produced strength reductions of the order of 25%. Mixes including lime and tufa debris after 7 days setting were too weak for satisfactory use. After longer periods addition of trace improves the strength of common Portland cement somewhat, but not that of very finely-ground cement. Contraction is reduced by trace addition in the case of common cements, as also by prolonged contact with H₂O. With fine cements trace increases the contraction.</p> <p>C.I.</p>																			
A.S.S.A. METALLURGICAL LITERATURE CLASSIFICATION																			
100000 02										100000 02									
100000 02										100000 02									

Critical studies on the determination of silica in volcanic tuffs. A. SIMON *and*
Cham. us. condensation 32, 37-44 (1950). Cf. *J. I.* 26, 1352. Full details are given
of experiments which show that the attempt to determine SiO_2 by extraction with alkali solutions is likely
to result in erroneous conclusions. W. T. H.

W. T. H.

A 12 11A METALLURGICAL LITERATURE CLASSIFICATION

The influence of time of mixing and of the addition of trass upon the strength of fluid cement mortars. A. STROMK. *Rud. khim. soc. razved. khim.* 32, 55-84 (1930).
The influence of time of mixing differs according to the nature of the cement and the kind of addns. that are made. K. K. KAMENNYKH

AS 2.564 MISCELLANEOUS LITERATURE CLASSIFICATION

CIA-RDP86-00513R001653120012-0"

Tests with surfacing concrete and addition of trass. H. A. STROMBERG and
chem. no. combine chem. 32, 80 (1930) (publ. 1931) of C. J. 20, 1931 K: K

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

U.S. GOVERNMENT PRINTING OFFICE: 1967 O - 340-117

Testing of high-grade concrete containing trass. I. A. Stepanov. *Russkaya inzhenernaya shkola* 33, 19 23 (1930). Addn. of trass to cement (20% of the wt. of the cement) reduces the strength (detd. after 7 days) of a 1:2:4 concrete by about 25%. If sand is replaced by an amt. of trass equal to 25% by wt. of the cement, the reduction in strength is 27% for "Pod" brand cement and 17.4% for "Dambovita" brand of Kuhl cement. Conclusion. Concrete made with a binder of cement, trass and lime does not lend itself to works in which a high initial strength is required such as roads. A slightly higher strength is obtained with concrete in which the sand and gravel are replaced by volcanic tuff.

chem. soc. rumine chim. 33, 33-5(1930) -- Expts. were carried out on (1) standard portland, (2) high initial strength portland and (3) Kuhl cements. In all cases the smallest contraction was observed with specimens which had remained longest under water. The effect of addn. of trass is greater with (1) than with (2) or (3). The increase in contraction of (2) is negligible with up to 10% trass, further addn. increases the contraction at an ever-increasing rate. Addn. of up to 20% trass to (1) causes appreciable reduction in contraction, the reduction being max. at 10-15% trass; above 20% an opposite effect is produced, as with (2).

A. STROPOV. *Rus.*
A PAPINEAU-COUTURE

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX																									
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<p>20</p> <p>The effect of magnesium sulfate on portland cement. A. SIKOROV. <i>Nal. chim. so. române chim.</i> 33, 51:6(1980).—The destructive action on the mortar is due to the phys. transformation which follows the chem. reaction; the newly formed compds. have different cryst. forms with more water of crystn. This effect was noted by the change in vol., by the absorption of ions of the soln. and by the yield of substances to the soln.</p> <p>G. T. MOROK</p>																									
<p>ASAC-SEA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

The absorption power of trass of Slanic Prahova, Roumania, and its industrial application. A. STEFOR. *Bul. chim. soc. romane chim.* 33, 75-81 (1930). --The chem. reaction between trass and $\text{Ca}(\text{OH})_2$ sol. is preceded by an adsorption phenomenon. Trass absorbs cations more readily than anions and Ca ions are fixed more than Mg ions. The properties of trass indicate that it can be used for dealkalization of boiler water and also for decolorization of mineral and vegetable oils. G. T. MOTOK.

G. T. MOTOK

ASD-56A METALLURGICAL LITERATURE CLASSIFICATION

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Critical study of methods for determining silica in volcanic tufa. A. STEORON.
Bull. chim. soc. romane chim. 33, 11-17(1931).—The cause of the hardening of hydraulic
 cement made from trass is chiefly the reaction between $\text{Ca}(\text{OH})_2$ from the added lime,
 and the SiO_2 of the trass. Various attempts have been made, therefore, to det. the so-
 called sol. SiO_2 by heating the sample with alk. solns. It is clearly shown, as a result of
 expts., that all such methods are more or less uncertain and that the results vary greatly
 when slight variations are made in the method of treatment, even when the variations
 are only those likely to occur in actual practice. W. T. H.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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20

ROMANIAN TRENCH, their reactions and technical properties. A. STANCOIU, Tond. Zig 55, 470 H(1931).—Exptl. data are given to show that the haryla-oo method for detn. of quality is valueless. S.'s method (C. A. 23, 188) is reliable. B. A. SOTCU

ASM S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

PROCESS AND PROPERTIES INDEX	
BC	A-2
<p>"Rate of action" at Bucharest in February, 1950. A. S. Popov (Bul. Chim. Soc. Roumaine Stiinte, 32, 1952, 54-56). A yellow dust which fell together with snow in a gale of wind in various parts of Roumania consisted mainly of SiO_2 and was in many respects similar to a volcanic tuff. The presence of humic acid, however, indicated that the dust originated from wind-swept fields bare of snow. C. I.</p>	
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION	
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COMMON ELEMENTS		COMMON VARIANTS	
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PROCESSES AND PROPERTIES INDEX			
<p>BC</p> <p>I. Reactivity of Romanian trass in trass-cement mortars. II. Strength of trass-cement mortars. III. Effect of fineness of grinding on the strength of trass-cement mortars. IV. Effect of heating trass on its reactivity and technical properties. V. Effect of small quantities of sodium carbonate on the binding properties and strength of trass-cement mortars. A. Sidorov. (Bul. Chim. Soc. Roumanie, 1933, 34, 17-22, 23-34, 35-38, 40-49, 50-60).—I. The trass contains H_2O 13.8-14.4, SiO_2 62.5-65.4, $(Al,Fe)_2O_3$ 13.5-13.8, CaO 6.8-8.8, MgO 0.7-1.0, and minor constituents 2.8-3.5%. It takes an active part in the hardening of cement mixtures, since its SiO_2 and Al_2O_3 react readily with the free CaO and thereby the hydraulic modulus of the mortar fraction of the mixture is reduced, the silicate modulus increased, and the % CaO sol. in 18% excess solution reduced the higher is the trass content.</p> <p>II. Substitution of up to 30% of the usual cement content of cement-sand mortars by trass increases the strength, reduces the d, and yet results in a less porous product after hardening.</p>		<p>III. Addition of 10% of coarsely crushed or graded trass to cement increases the compressive strength of mortars made from it, whereas fine trass tends to reduce this strength owing to the rapidity with which it reacts with the CaO.</p> <p>IV. Heating of the trass at 500° effects only a temporary improvement in its reactivity, whilst heating at 1000° causes a considerable diminution in its hydraulic properties.</p> <p>V. Addition of small quantities of Na_2CO_3 to trass-cement mortars accelerates remarkably the rate of setting but this effect diminishes with increasing trass content and increasing additions of Na_2CO_3. A. B. P.</p>	
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PROCESSING AND PROPERTY INDEX																									
<p>BC</p> <p>B-I-10</p> <p>Chemical and technical study of trans cement-standard mortars. A. Frazon and H. Thompson (Bul. Chim. Soc. Romania, 1953, 26, 3-14).—Slonic trans, either in the raw state or after treatment with acids or alkalis, used as a substitute (10% and 20%) in 3 cements of varying Ca content, gave sound mortars with greater H₂O requirements than that of the original cement. Setting times were altered. The chemical reactivity of the transes and the strength of the trans-cement mortars increased with age and with increasing Ca content of the cement. The higher Ca cements (without trans addition) decreased in strength at 1 year. Previous heat-treatment had no effect on the activity of the trans. A method is described for assessing chemical reactivity by determination of the hydronic modulus in the solution after treating the cements with HCl (d 1-12).</p> <p>T. W. P.</p>																									
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<p>B-I-1</p> <p>Reactions between trams and electrolytic conditions and the application to water softening. A. Symon and G. Tern (Bul. Chim. Sec. Roumne, 1933, 26, 45-57).—Investigation of the thermal dehydration and the actions of cold HCl and of NaCl and Ca(OH)₂ solutions shows that both Glatic and Dej trams behave solitically and are suitable as H₂O softeners. T. W. P.</p>																																																																													
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1ST AND 2ND CROSES

PROCESSING AND REPORTING

18

The adsorption by trass of organic dyes and the application of trass as bleaching agent. A. Strogon and C. Filimon. *Dokl. chim. soc. romine chem.* 30, 19-20(1933) (in German).—Trass prepri. from Slanic tuff is rich in sol. SiO_2 and colloidal matter. Triaryl and azo dyes are most easily adsorbed, others not at all. The adsorption is influenced by heat treatment of the trass up to 400° and pretreatment with acid or alkali. Bleaching of oils, fats and sugar soles. was effected, usually best with the trass activated with H_2SO_4 soln. P.S. Roller

ASB. 35A METALLURGICAL LITERATURE CLASSIFICATION

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cr *20*
 The influence of trans upon the properties of plaster.
 II. A. Steopos. *Bul. chim. soc. romane chim.* 36, 61-4
 (1963) (in French).— Crude Slanic trans (I), heated on the
 water bath with HCl soln. d. 1.12, washed and dried (II),
 treated with NaOH soln. up to 1%, filtered and dried (III),
 and heated on the water bath with 20% NaOH, washed
 and dried (IV), were added to plaster. The time of flow
 set was increased except for IV, and the scratch set de-
 creased except for II. The strength was decreased by II,
 increased by I, II and IV up to 10% addn., and de-
 creased thereafter especially for IV. The effect is at-
 tributed to base exchange between alkalis in the trans and
 CaSO₄ in soln. P. S. Roller

Determination of the mix proportions in mortar and concrete. A. Strege. *Zement* 23, 759-62 (1934).—The methods proposed by Krieger (C. A. 18, 2231) and in later investigations are discussed. The detn. of the cement content of known mortars showed that treatment of the powder material with dil. HCl only is not sufficient to dissolve all the silica from the cement, but that an alk. wash is required also. It is suggested that cold 5% HCl and cold 5% Na_2CO_3 contg. 5% NaCl solns. be used to avoid possible soln. of the natural SiO_2 and silicates. The addn. of 5% NaCl to the reagents and the use of 0.8% HCl wash soln. prevent the discoloration of the filtrates. It is possible to detect the presence of hydraulic admixts. by detg. the silica sol. in the HCl and in the Na_2CO_3 solns. separately, since the soly. of such admixts. is high in the alk. soln. H. P. Krieger

ASD SCA METALLURGICAL LITERATURE CLASSIFICATION

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<div style="display: flex; justify-content: space-between;"> 10 20 </div> <p>Analytical investigation of some Bucharest concretes for road construction. A. Steopor. Bull. inst. roumain beton, constructions routes 4; 63-78(1939); Chem. Zentr. 1939, II, 2365.—The same standards apply to the basic concrete layer of asphalted streets as to uncoated concrete streets. The mixing proportions, which should be detd. on 50-kg. lots, can be detd. directly or indirectly. The best results are obtained by direct detn. from the sol. CaO or by the indirect method. Analyses of 13 street concretes are discussed and the importance of testing the finer admixed material is pointed out. M. G. Moore</p>																																																																																																																																																																								
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<p>Research relative to concrete for highways carried out during the year 1946. A. Sirovsky. -- <i>Bul. Inst. Natl. Cercetari Tehnol.</i>, 2 [1-4] 102-83 (1947) (in Romanian with French synopsis). --S. reports on tests made with concretes for use on highways which are made of domestic aggregates. Only by using special cements in place of normal cements could the specified values of resistance be obtained. The use of fine sands has an unfavorable effect on resistance and should be prohibited. M. H.</p>																									
<p>ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

Setting of cements in the presence of great quantities of water. A. Steapov. *Bull. études et recherches tech.* (Bucharest) 1, 183-8(1949).—An app. is described for measuring the setting time of cements which eliminates the discrepancies found between setting times measured in the lab. and observed in practice. A porous cup is filled to a height of 40 mm. with cement paste of normal consistency. The cup is immersed in a crystal. dish filled with H_2O or a salt soln. Salts which may form ppts. in the pores of the cup, such as sulfates, must be avoided. The penetration of a needle of 1 sq. mm. cross section under 300-g. load is measured in the usual way.

G. Cohn